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TRACKS OF TOTAL SOLAR ECLIPSES IN 1955, 1956, 1957

At the request of Commission 13 of the International Astronomical Union, these data have been specially calculated in the Office of the American Ephemeris, from tabular positions of the Sun and Moon computed for the purpose in the British Nautical Almanac Office. The aim is to provide the location of tracks of total solar eclipses far enough in advance so that in regions where extended meteorological observations are lacking, suitable sites for eclipse expeditions can be determined. It is intended to issue this information annually, eight years in advance.

The following corrections have been applied to the tabular positions of the Sun and Moon: to the Sun's mean longitude, $+1^m00$; to the Moon's mean longitude, -2^m00 ; to the Moon's latitude, -0^m5 . The effect of a subsequent additional correction to the Moon's mean longitude on the position of the eclipse track may be closely determined as follows: for an additional positive correction of k seconds of arc, lay off from any point on the track a distance of $27k$ seconds of arc in longitude, eastward along the same parallel of latitude.

The approximate width of the path has been calculated from the formulae of Michailov, *A. N.* 243, 49. The width is approximately the great-circle distance, on the surface of the Earth, perpendicular to the track, in statute miles.

The track of the total solar eclipse of 1956 June 8 lies entirely over the South Pacific Ocean, extending from approximately long. -178° , lat. -55° , to long. $+100^{\circ}$, lat. -55° , without crossing any land; the position at local apparent noon is long. $+141^{\circ}$, lat. -40° .

No total solar eclipse occurs in 1957.

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Total Solar Eclipse of June 20, 1955

Universal h m Time	Latitude °	Longitude °	Duration on Central Line s	Width of Path mi
2 28.4 (Limit)	- 3 42.1	- 54 48.8	...	...
2 30	+ 0 16.3	- 63 45.5	216	127
35	4 03.9	72 12.3	247	133
40	6 20.0	77 22.6	268	137
45	8 01.7	81 23.6	287	140
50	9 22.9	84 46.7	304	142
55	10 30.0	87 45.1	319	144
3 00	+11 26.3	- 90 26.2	333	146
05	12 14.0	92 54.3	346	148
10	12 54.2	95 12.4	358	149
15	13 28.2	97 22.5	369	151
20	13 56.5	99 26.2	380	152
25	14 19.8	101 24.5	389	153
30	+14 38.3	- 103 18.4	397	154
35	14 52.5	105 08.6	405	155
40	15 02.5	106 55.6	411	155
45	15 08.7	108 40.1	417	156
50	15 11.2	110 25.2	421	157
55	15 10.0	112 03.0	424	157
4 00	+15 05.2	- 113 42.2	427	158
05	14 57.1	115 20.3	428	158
10	14 45.5	116 57.6	428	158
15	14 30.6	118 34.4	427	158
20	14 12.2	120 11.1	425	157
25	13 50.4	121 47.9	422	157
30	+13 25.2	- 123 25.3	418	157
35	12 56.5	125 03.5	413	157
40	12 24.1	126 43.0	407	156
45	11 47.9	128 24.2	400	155
50	11 07.7	130 07.7	392	154
55	10 23.4	131 54.1	383	153
5 00	+ 9 34.5	- 133 44.1	374	152
05	8 40.8	135 38.6	364	150
10	7 41.5	137 38.9	353	149
15	6 36.2	139 46.5	341	147
20	5 23.7	142 03.5	328	145
25	4 02.8	144 32.7	314	144
30	+ 2 31.3	- 147 18.6	300	142
35	+ 0 45.9	150 28.4	284	140
40	- 1 19.4	154 15.2	266	137
45	3 58.5	159 09.1	245	134
50	8 03.5	167 06.1	216	129
5 51.9 (Limit)	- 12 34.2	- 176 46.9	...	...

In the eclipse of 1955 June 20, geocentric conjunction occurs at $4^{\text{h}}11^{\text{m}}28^{\text{s}}.07$, in right ascension $5^{\text{h}}51^{\text{m}}37^{\text{s}}.13$, the declination of the Sun being $23^{\circ}25'50''.77$. East longitudes are negative.